EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Richard M. Beck (Reg. No. 22,580) on April 1, 2009.

The application has been amended as follows:

In the specification:

On page 1, line 1, replace the title:

"**Aqueous Non-ionically Stabilised Epoxy Resins**"

with:

--Aqueous Non-ionically Stabilized Epoxy Resins--

On page 17 (Abstract page), replace:

"**Summary**

Aqueous non-ionically stabilised epoxy resins

Aqueous radiation curable binders comprising non-ionically stabilised epoxy resins **ABC**, characterised in that they comprise building blocks of epoxy resins **A** modified with polyethylene glycol, of epoxy resins B that are free from polyethylene glycol, and of olefinically unsaturated acids **C**, and that at least 50 % of all reaction products derived from the epoxy resins **A** and **B** comprise at least one ester group formed by reaction of a terminal epoxy group with an olefinically unsaturated acid **C**, a process for their preparation, and use thereof as coating composition"

with:

--Abstract

Aqueous non-ionically stabilized epoxy resins

Aqueous radiation curable binders comprising non-ionically stabilized epoxy resins **ABC**. Resins **ABC** are an adduct mixture of: adducts formed by the reaction of polyethylene glycol-modified epoxy resins **A** with olefinically unsaturated acids **C**, and adducts formed by the reaction of epoxy resins **B**, that are free from polyethylene glycol derived groups, with olefinically unsaturated acids **C**. A process for preparing aqueous radiation curable binders comprising non-ionically stabilized epoxy resins **ABC**, and a process of coating a substrate with aqueous radiation curable binders comprising non-ionically stabilized epoxy resins **ABC**.--

In the claims:

1. (currently amended) Aqueous radiation curable binders comprising non-ionically stabilized epoxy resins ABC, wherein resins ABC are an adduct mixture of: adducts formed by the reaction of polyethylene glycol-modified epoxy resins A with olefinically unsaturated acids C, and adducts formed by the reaction of epoxy resins B, that are free from polyethylene glycol derived groups, with olefinically unsaturated acids C;

wherein epoxy resins A are formed by a two-step reaction comprising: forming a ring opening reaction product of polyethylene glycol and an epoxy resin having an average of two epoxy groups per molecule, and then reacting the ring opening reaction product with a polyhydric phenol and a glycidyl ester or a glycidyl ether of a polyhydric phenol in an advancement reaction; wherein said glycidyl ethers have a specific content of epoxide groups of between 1.1 mol/kg and 6.7 mol/kg; and

wherein the adducts formed by the reaction of A with C comprise at least one ester group formed by reaction of a terminal epoxy group of A with olefinically unsaturated acids C, and the adducts formed by the reaction of B with C comprise at least one ester group formed by reaction of a terminal epoxy group of B with olefinically unsaturated acids C.

8. (currently amended) A process for the preparation of aqueous radiation curable binders of claim 1, comprising the steps of: (1) forming polyethylene glycol-modified epoxy resins A; (2) mixing epoxy resins A with epoxy resins B, that are free from polyethylene glycol derived groups; (3) reacting epoxy resins A and epoxy resins B with olefinically unsaturated acids C, yielding non-ionically stabilized epoxy resins ABC; wherein resins ABC are an adduct mixture

of: adducts formed by the reaction of A with C comprising at least one ester groups formed by reaction of a terminal epoxy group of A with olefinically unsaturated acids C, and adducts formed by the reaction of B with C comprising at least one ester group formed by reaction of a terminal epoxy group of B with olefinically unsaturated acids C;

wherein step (1) is a two-step reaction comprising: forming a ring opening reaction product of polyethylene glycol and an epoxy resin having an average of two epoxy groups per molecule, and then reacting the ring opening reaction product with a polyhydric phenol and a glycidyl ester or a glycidyl ether of a polyhydric phenol in an advancement reaction; wherein said glycidyl ethers have a specific content of epoxide groups of between 1.1 mol/kg and 6.7 mol/kg; and wherein said polyhydric phenol is selected from the group consisting of resorcinol, hydroquinone, 2,2-bis-(4'-hydroxyphenyl)-propane (Bisphenol A), mixtures of isomers of dihydroxydiphenyl methane (bisphenol F), 4,4'-dihydroxydiphenyl cyclohexane, 4,4'- dihydroxy-3,3'-dimethyldiphenyl propane, 4,4' dihydroxydiphenyl, 4,4'-dihydroxybenzophenone, bis-(4'-hydroxyphenyl)-1,1-ethane, bis-(4'-hydroxyphenyl)-1,1-isobutane, bis-(4'-hydroxy-tert-butylphenyl)-2,2-propane, bis-(2-hydroxynaphthyl)-methane, 1,5-dihydroxynaphthalin, tris-(4-hydroxyphenyl)-methane, bis-(4-hydroxyphenyl) ether, bis-(4-hydroxyphenyl) sulfone, chlorination products thereof and bromination products thereof.

12. (currently amended) A method of applying a corrosion protection coating to a substrate, comprising the steps of: mixing the binders according to claim 1 with a photoinitiator, and optionally further additives to form a paint; coating the substrate with the paint by rolling, dipping, spraying, brushing, or application with a doctor blade; drying the coating at a

temperature of from 20 °C to 90 °C; and curing the coating by irradiation with high energy radiation.

13. (currently amended) The method of claim 12 wherein the substrate is a metal substrate.

14. (currently amended) A method of applying a corrosion protection coating to a substrate, comprising the steps of: mixing the binders according to claim 2 with a photoinitiator, and optionally further additives to form a paint; coating the substrate with the paint by rolling, dipping, spraying, brushing, or application with a doctor blade; drying the coating at a temperature of from 20 °C to 90 °C; and curing the coating by irradiation with high energy radiation.

15. (currently amended) The method of claim 14 wherein the substrate is a metal substrate.

16. (currently amended) A method of applying a corrosion protection coating to a substrate, comprising the steps of: mixing the binders according to claim 4 with a photoinitiator, and optionally further additives to form a paint; coating the substrate with the paint by rolling, dipping, spraying, brushing, or application with a doctor blade; drying the coating at a temperature of from 20 °C to 90 °C; and curing the coating by irradiation with high energy radiation.

17. (currently amended) The method of claim 16 wherein the substrate is a metal substrate.

18. (currently amended) A method of applying a corrosion protection coating to a substrate, comprising the steps of: mixing the binders according to claim 6 with a photoinitiator, and optionally further additives to form a paint; coating the substrate with the paint by rolling, dipping, spraying, brushing, or application with a doctor blade; drying the coating at a temperature of from 20 °C to 90 °C; and curing the coating by irradiation with high energy radiation.

19. (currently amended) The method of claim 18 wherein the substrate is a metal substrate.

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DETAILED ACTION

Pending Claims

Claims 1-8 and 12-19 are pending.

Response to Amendment

1. The rejection of claims 9-11 under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, has been rendered moot by the cancellation of these claims.

2. The rejection of claims 1-8, 12, and 13 under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, has been overcome by amendment.

3. The objection to claims 9-11 under 37 CFR 1.75(c) as being in improper form has been rendered moot by the cancellation of these claims.

Comment Regarding the Examiner's Amendment

4. The changes were made to improve clarity. Support can be found in: working example 2, the bottom of page 6 of the specification, and pages 9-10 of the specification.

Allowable Subject Matter

5. Claims 1-8 and 12-19 are allowed.

Communication

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Feely whose telephone number is (571)272-1086. The examiner can normally be reached on M-F 8:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Y. Pyon can be reached on 571-272-1498. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael J Feely/
Primary Examiner, Art Unit 1796

April 1, 2009